

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (*Currently Amended*): An apparatus for managing network interface information, comprising:

a network equipment system having information that can identify a site connected to one or more interfaces of each piece of network equipment and including one or more management information bases that store the interface information, said network equipment system comprises a plurality of site units, the interface information being set in each said site unit forming the network equipment system, each said site unit having an identification code associated therewith such that a predetermined site unit may be identified, whereby each said identification code is defined by user-selectable rules, each said identification code comprising a plurality of multi-step sub-codes; and

a network management system for polling the management information bases of each piece of the network equipment within the network equipment system to collect the interface information, adopting information that can identify each site as primary information to compare the primary information with already registered information and correcting the interface information for each piece of the network equipment, wherein the network management system reads interface information of each piece of automatic management target equipment, adopts a code granted to a predetermined site interfaced

with each piece of network equipment as primary information, and compares the primary information with the already registered information and corrects any changes therein.

Claims 2-3 (*Canceled*)

Claim 4 (*Currently Amended*): The apparatus according to claim [[3]] 1, wherein the multi-step sub-codes comprise classifiers in order to classify each code.

Claim 5 (*Original*): The apparatus according to claim 4, wherein each code is classified by using at least one of a group of classifier, a Lightweight Directory Access Protocol and X.500.

Claim 6 (*Currently Amended*): The apparatus according to claim [[3]] 1, wherein each code corresponds to each interface description of each piece of the network equipment.

Claim 7 (*Original*): The apparatus according to claim 6, wherein each code is inputted to an interface description of each piece of the network equipment.

Claim 8 (*Original*): The apparatus according to claim 1, wherein the network management system reads a code inputted to an interface description of each piece of the network equipment through Simple Network Management Protocol and registers the read

code to a list of each piece of automatic management target equipment, when registering the interface of the corresponding network equipment.

Claim 9 (Canceled)

Claim 10 (Previously Presented): An apparatus for managing network interface information automatically, comprising:

polling agents for polling interface information of each piece of network equipment from management information bases of each piece of the network equipment at every predetermined time or in real-time;

an automatic management module for confirming changes or adds of the interface information read from the polling agents, correcting or managing the interface information, wherein said automatic management module comprises a management target equipment list portion for managing interface changes, and a site code management portion for enabling information matched with each code to be input and displayed, whereby the site code is granted to a site connected to a port of each piece of network equipment at a pre-determined set of times using the management target list and comparing the collected information with the registration information in order to manage the network information automatically; and

a database server for storing registration information for each piece of the network equipment or each interface managed by the automatic management module and providing user interface with the stored information.

Claim 11 (*Original*): The apparatus according to claim 10, the automatic management module comprising:

a management target equipment list portion for managing interface changes;

a site code management portion for enabling information matched with each code to be inputted and displayed;

an automatic management engine for collecting information of each piece of the network equipment at every predetermined time or in real-time using the management target list and comparing the collected information with the registration information to manage network interface information automatically; and

an interface management display portion for displaying a log of corrected information and intervention by an administrator, if necessary, as a web page.

Claim 12 (*Currently Amended*): A method for managing network interface information, comprising steps of:

(a) granting codes, indicating sites connected to each interface of each piece of network equipment, storing the codes to a Management Information Base (MIB) and a Network Management System (NMS), and generating a management target equipment

list, wherein each said code is granted according to a set of pre-defined rules in order to identify a pre-determined site, each said code being comprised of a plurality of multi-step codes;

(b) collecting interface information for each piece of the network equipment through Simple Network Management Protocol to generate a table at every predetermined time or in real-time;

(c) checking non-defectiveness of the codes for the collected interface information of the table; ~~and~~

(d) comparing information registered to a network management system with the collected table using the granted codes and correcting changes of the registered information; and,

(e) operating a network management system with changed interface information.

Claim 13 (*Original*): The method according to claim 12, the automatic management for the network equipment comprising the sub-steps of:

collecting information from each piece of the automatic management target equipment selected by an administrator to generate the table;

notifying abnormal codes among the collected information to the administrator, deleting the abnormal codes from the collected table, checking operation statuses of an interface of each piece of the network equipment to decide if the codes are necessary and notifying the checked results to the administrator;

comparing the collected table with the registered information and correcting the registered information; and

deciding if a line is canceled or used and deleting unregistered codes from a site code list.

Claim 14 (*Previously Presented*): A method for managing network interface information, comprising the steps of:

- (a) inputting interface information connected or to be connected to an interface of each piece of network equipment, said interface information being set according to a set of user-selectable, pre-defined rules;
- (b) matching the interface information with interface description;
- (c) registering the inputted information to a network management system; and
- (d) when the interface information has been corrected, changing the interface information using codes of the inputted or registered information; and,
- (e) operating a network management system with changed interface information.

Claim 15 (*Original*): The method according to claim 14, wherein interface information such as Null or loop-back, of no meaning in automatic management is not used as information for change.

Claim 16 (*Original*): The method according to claim 14, wherein each piece of the network equipment has different hostname each other.

Claim 17 (*Original*): The method according to claim 16, wherein granted codes may be the same if each piece of the network equipment has different hostname each other.

Claim 18 (*Original*): The method according to claim 14, wherein granted codes are different each other if there are any two or more pieces of the network equipment having the same hostname.

Claim 19 (*Original*): The method according to claim 14, wherein code information is granted differently each other or predetermined information is added to a code, which is granted to a site, if there are 2 or more lines at a site of the same interface or the same piece of the network equipment.

Claim 20 (*Previously presented*): A method for managing network interface information, comprising the steps of:

- (a) inputting a hostname to each piece of network equipment;
- (b) inputting interface information including a code of corresponding site to one or more interfaces of each piece of the network equipment, said interface information being set according to a set of user-selectable, pre-defined rules;

(c) generating an automatic management list to register the list to a network management system;

(d) receiving current network equipment information at a predetermined period or in real-time, comparing the received information with the one registered to the network management system using one or more hostname and code information, and performing at least one of a group of change of the interface information, addition of a new interface and deletion; and

(e) displaying a new interface management picture.

Claim 21 (*Original*): The method according to claim 20, further comprising reading management information base values of a corresponding piece of network equipment using SYSlog transmitted from each piece of the network equipment at a predetermined time or in real-time, if interface information is changed.